1. Choose the reasonable product for each expression. Explain your reasoning in the spaces below using words, pictures, or numbers.

a. $2.5 \times 4$
   
   0.1, 1, 10, 100

   2.5 rounds to 3 and $3 \times 4 = 12$, so 10 is the most reasonable choice.

b. $3.14 \times 7$
   
   2198, 219.8, 21.98, 2.198

   3.14 rounds to 3 and $3 \times 7 = 21$, so 21.98 is the most reasonable choice.

c. $8 \times 6.022$
   
   4.8176, 48.176, 481.76, 4817.6

   6.022 rounds to 6 and $8 \times 6 = 48$, so 48.176 is the most reasonable choice.

d. $9 \times 5.48$
   
   493.2, 49.32, 4.932, 0.4932

   5.48 rounds to 5 and $9 \times 5 = 45$, so 49.32 is the most reasonable choice.
2. Pedro is building a spice rack with 4 shelves that are each 0.55 meter long. At the hardware store, Pedro finds that he can only buy the shelving in whole meter lengths. Exactly how many meters of shelving does Pedro need? Since he can only buy whole number lengths, how many meters of shelving should he buy? Justify your thinking.

\[ \begin{array}{c c c c c}
\text{shelves} & 0.55 & 0.55 & 0.55 & 0.55 \\
? \text{ meters} & 2.2 \\
\end{array} \]

He will need to buy \(3\) meters, so he has enough.

3. Marcel rides his bicycle to school and back on Tuesdays and Thursdays. He lives 3.62 kilometers away from school. Marcel’s gym teacher wants to know about how many kilometers he bikes in a week. Marcel’s math teacher wants to know exactly how many kilometers he bikes in a week. What should Marcel tell each teacher? Show your work.

Marcel’s ride:
\[ \begin{array}{c c c c c c}
\text{there} & \text{back} \\
3.62 & 3.62 & 7.24 \text{ km total (one day)} \\
\end{array} \]

He travels 14.48 km total on Tues. and Thurs.

\[ \begin{array}{c c c c c c}
\text{14 ones} & 2 \text{tenths} & 4 \text{hund.} \\
2 \times & 14 & 0.08 &= 14.48 \\
\end{array} \]

4. The poetry club had its first bake sale, and they made $79.35. The club members are planning to have 4 more bake sales. Leslie said, “If we make the same amount at each bake sale, we’ll earn $3,967.50.” Peggy said, “No way, Leslie! We’ll earn $396.75 after five bake sales.” Use estimation to help Peggy explain why Leslie’s reasoning is inaccurate. Show your reasoning using words, numbers, or pictures.

$79.35 rounds to $80. $80 \times 5 \text{ bake sales} = $400, so Peggy's explanation is correct.

Leslie probably rounded to $800, because $800 \times 5 = $4,000, which is close to Leslie's reasoning.